

WHAT IS CLAIMED IS:

1. An active matrix device comprising:
  - a plurality of column lines formed over a substrate;
  - a plurality of row lines extending over the substrate crossing said plurality of column lines to define a plurality of pixels in a matrix form;
  - a plurality of switching elements over the substrate provided at intersections between said plurality of column lines and said plurality of row lines;
  - a gate driver circuit over the substrate to drive said plurality of row lines;
  - a source driver circuit over the substrate to drive said plurality of column lines, said source driver circuit including a plurality of analog buffer circuits corresponding to said plurality of column lines,wherein each of the analog buffer circuits comprises at least two circuits connected in parallel with respect to a corresponding one of the <sup>signal</sup> column lines, each of said circuits comprising at least one thin film transistor; and one of said at least two circuits of one of the analog buffer circuits is positioned in the same line along said column lines as one of said at least two circuits of another one of the analog buffer circuits.
2. An active matrix device according to claim 1 wherein said at least two circuits are source follower circuits.
3. An active matrix device according to claim 1 wherein an electrical characteristics of said at least two circuits in one of said analog buffer circuits differ from each other.
4. An active matrix device comprising:
  - a plurality of column lines formed over a substrate;
  - a plurality of row lines over the substrate extending across said plurality of column lines to define a plurality of pixels in a matrix form;
  - a plurality of switching elements over the substrate provided at intersections between said plurality of column lines and said plurality of row lines;
  - a gate driver circuit to drive said plurality of row lines;
  - a source driver circuit to drive said plurality of column lines, said source driver circuit including a plurality of buffer circuits formed over said substrate in a plurality of columns corresponding to said plurality of column lines;wherein each of the buffer circuits includes at least first and second circuits connected in parallel with respect to a corresponding one of the column lines, and wherein one

of said first and second circuits of each of said plurality of column lines is positioned in the same column as one of said first and second circuits for another column line.

5. An active matrix device according to claim 4 wherein each of said first and second circuits includes a thin film transistor.

6. An active matrix device comprising:  
an active matrix circuit comprising a plurality of thin film transistors formed over a substrate;

at least one driver circuit over the substrate to drive said active matrix circuit, said driver circuit including a plurality of buffer circuits wherein said driver circuit is operationally connected to said active matrix circuit through a plurality of signal lines extending substantially in a first direction,

wherein each of the buffer circuits comprises at least first and second circuits, each of said first and second circuits comprising at least one thin film transistor, and wherein one of said first and second circuits of one of the buffer circuits is positioned in the same line along said first direction as one of the first and second circuits of another one of the buffer circuits.

7. An active matrix device according to claim 6 wherein said first and second circuits are source follower circuits.

8. An active matrix device according to claim 6 wherein an electrical characteristics of said first and second circuits in one of said buffer circuits differ from each other.

9. An active matrix device comprising:  
an active matrix circuit comprising a plurality of thin film transistors formed over a substrate;

a plurality of signal lines extending in a column direction over the substrate;

at least one driver circuit over the substrate to drive said active matrix circuit through said signal lines, said driver circuit including a plurality of buffer circuits;

wherein each of the buffer circuits includes at least first and second circuits connected in parallel with respect to a corresponding one of the signal lines, and wherein one of said first and second circuits of each of said plurality of column lines is positioned in a same line along said signal lines as one of said first and second circuits for another column line.

10. An active matrix device according to claim 9 wherein each of said first and second circuits includes a thin film transistor.
11. An active matrix device according to claim 1 wherein said thin film transistor is inverse stagger type.
12. An active matrix device according to claim 4 wherein each of said first and second thin film transistors is inverse stagger type.
13. An active matrix device according to claim 6 wherein each of said first and second thin film transistors is inverse stagger type.
14. An active matrix device comprising:  
a plurality of thin film transistors formed over a substrate; and  
at least one driver circuit over the substrate to drive said plurality of thin film transistors through a plurality of signal lines extending substantially in a first direction, said driver circuit including a plurality of buffer circuits connected to said signal lines,  
wherein each of said buffer circuits includes at least first and second circuits connected in parallel and each of said first and second circuits comprises at least one thin film transistor comprising crystallized semiconductor film, and one of the first and second circuits of one of the buffer circuits is positioned in the same line along said first direction as one of said first and second circuits of another one of the buffer circuits.
15. An active matrix device according to claim 14 wherein the thin film transistor in said buffer circuits has an LDD structure.
16. An active matrix device comprising:  
a plurality of thin film transistors formed over a substrate and a plurality of signal lines; and  
at least one driver circuit over the substrate to drive said active matrix circuit, said driver circuit including a plurality of buffer circuits connected to said plurality of signal lines,  
wherein each of said buffer circuit includes at least first and second circuits connected in parallel and each of said first and second circuits comprises at least one thin film transistor comprising crystallized semiconductor film.
17. An active matrix device according to claim 16 wherein the thin film transistor in said buffer circuits has an LDD structure.

18. An active matrix device comprising:  
a plurality of pixels;  
a plurality of switching elements formed over a substrate for switching said plurality of pixels;  
at least one driver circuit for driving said plurality of switching elements through a plurality of signal lines;  
a plurality of buffer circuits in said driver circuit wherein each of said buffer circuits comprises at least first and second circuits, each of which includes at least one thin film transistor formed over said substrate, and  
wherein the first and second circuits in each of said buffer circuits is connected in parallel with respect to a corresponding one of the signal lines, and one of the first and second circuits connected with one of said signal lines is located on an extension line of another one of the signal lines adjacent to said one of the signal lines.

19. An active matrix device according to claim 18 wherein each of said switching elements comprises a thin film transistor.

20. An active matrix device according to claim 18 wherein said driver circuit is a source driver circuit.

21. An active matrix device comprising:  
a plurality of pixels;  
a plurality of switching elements formed over a substrate for switching said plurality of pixels;  
at least one driver circuit over said substrate for driving said plurality of switching elements through a plurality of signal lines;  
a plurality of buffer circuits in said driver circuit wherein said buffer circuits are connected to said plurality of signal lines, and  
wherein at least one of said buffer circuits which is connected to one of said signal lines is positioned on an extension line of at least said one of the signal lines and another one of the signal lines adjacent to said one of the signal lines.

22. An active matrix device according to claim 21 wherein each of said switching elements comprises a thin film transistor.

23. An active matrix device according to claim 21 wherein said driver circuit is a source driver circuit.

24. An active matrix device according to claim 21 wherein each of said buffer circuits comprises at least one thin film transistor having a crystallized semiconductor film.

25. An active matrix device comprising:  
a plurality of pixels;  
a plurality of switching elements formed over a substrate for switching said plurality of pixels;  
at least one driver circuit formed over said substrate for driving said plurality of switching elements through a plurality of signal lines extending substantially in a first direction;  
a plurality of buffer circuits in said driver circuit wherein said buffer circuits are connected to said plurality of signal lines, and  
wherein a portion of at least one of the buffer circuits is positioned in a same line along said first direction as a portion of at least another one of the buffer circuits.

26. An active matrix device according to claim 25 wherein each of said switching elements comprises a thin film transistor.

27. An active matrix device according to claim 25 wherein said driver circuit is a source driver circuit.

28. An active matrix device according to claim 25 wherein each of said buffer circuits comprises at least one thin film transistor having a crystallized semiconductor film.

29. An active matrix device comprising:  
a plurality of pixels;  
a plurality of switching elements formed over a substrate for switching said plurality of pixels;  
at least one driver circuit formed over said substrate for driving said plurality of switching elements through a plurality of signal lines extending substantially in a first direction;  
a plurality of buffer circuits in said driver circuit wherein said buffer circuits are connected to said plurality of signal lines, and  
wherein each of the buffer circuits is arranged obliquely with respect to said first direction so that a portion of at least one of the buffer circuits is positioned in a same line along said first direction as a portion of at least another one of the buffer circuits.

30. An active matrix device according to claim 29 wherein each of said switching elements comprises a thin film transistor.

31. An active matrix device according to claim 29 wherein said driver circuit is a source driver circuit.

32. An active matrix device according to claim 29 wherein each of said buffer circuits comprises at least one thin film transistor having a crystallized semiconductor film.

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